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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,114	06/22/2001	Seung-Ho Choi	19916-003001	9054
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EXAMINER				
LUCAS, ZACHARIAH				
ART UNIT		PAPER NUMBER		
1648				
MAIL DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

09/888,114

## Applicant(s)

CHOI ET AL.

## Examiner

Zachariah Lucas

## Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2,3,5,12,14-19,21,22 and 42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,12,14-19,21,22 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 2, 3, 5, 12, 14-19, 21, 22, and 42 are pending and under consideration in the application.
2. In the prior action, mailed on October 19, 2007, claims 2, 3, 5-22, and 42 were pending in the application.
3. In the prior action, the Final action mailed on May 16, 2007, claims 2, 3, 5-22, and 42 were pending; with claims 2, 3, 5, 12, 14-22, and 42 pending and rejected; and claims 6-11, and 13 withdrawn as to non-elected inventions.
4. In the Response of April 21, 2008, Applicant amended claims 2 and 3; and cancelled claims 6-11, 13, and 20.
5. In view of the restatement of the obviousness rejection, the action is made Non-Final.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **(Prior Rejection- Withdrawn)** Claim 3 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite because it was not clear from the claim language if “the biopolymer” of claim 3 is intended to refer to the one biopolymer required by claim 2, or is intended to indicate that each of the “at least one” biopolymers of claim 2 are selected from the indicated group. In view of the amendments to the claims, the rejection is withdrawn.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **(Prior Rejection- Restated and Maintained)** Claims 2, 3, 5, 12, 14-22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Scott (6,458,387) in view of Watts (WO 98/30207), and further in light of the teachings of Noble (U.S. 4,574,152), Voser (U.S. 3,725,400), and Chromecek (U.S. 3,886,125). It is first noted that claim 2 (the independent claim) has been amended to require that at least one of the polymers (equivalent to the macromolecules in the Scott reference) used to produce the claimed compositions is carrageenan. It is accepted that the cited references do not specifically identify carrageenan as a useful biopolymer/macromolecule. The rejection is therefore restated as a rejection of claims 2, 3, 5, 12, 14-19, 21, and 22 over the teachings of Scott and Watts, further in view of either of Unger (US 6,315,981- of record in the action mailed on March 14, 2003) or Geftler et al. (US 5,968,895), and further in light of Noble, Voser, and Chromecek.

The teachings of the previously cited references have been described in the prior actions. It was noted in the action of March 2003, and by the Applicant in the Response, that Scott does identify polysaccharides as useful macromolecules for the making of the delivery particles. Moreover, the teachings of each of Unger (column 16, lines 35-41) and Geftler (columns 5-6) identify carrageenan as a useful polysaccharide for use in the making of drug delivery

compositions. Thus, it would have been obvious to those in the art to have used carrageenan as the macromolecule in the compositions suggested by the prior art.

The Applicant traverses the rejection on the basis that the teachings of the cited references fail to "lead one skilled in the art to use cephalosporin and carrageenan as the macromolecule or in a composition as recited in the claims." With respect to the cephalosporin, it was previously noted that the teachings of Scott specifically indicate that the particles may be used for the deliver of antibiotics, including cephalosporin. The argument with respect to carrageenan is not found persuasive in view of the restatement of the rejection as described above. The rejection is therefore maintained for the reasons above and the reasons of record.

10. **(Prior Rejection- Restated and Maintained)** Claims 2, 3, 5, 12, 14-22, and 42 were rejected under 35 U.S.C. 103(a) as being unpatentable over Scott in view of Watts, Noble, Voser, and Chromecek as applied to claims 2, 3, 5, 12, 14-22 above, and further in view of Horowitz et al. (U.S. 5,783,561). The rejection is restated as a rejection of claims 2, 3, 5, 12, 14-19, 21, 22, and 42 over the teachings of Scott in view of Watts, Unger, and/or Gefter, and in light of Noble, Voser, and Chromecek as applied above, and further in view of Horowitz. The Applicant traverses this rejection on the same basis as asserted above. The rejection is therefore maintained for the reasons indicated above.

11. **(Prior Rejection- Withdrawn)** Claims 2, 3, 5, 12, 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy et al. (WO 96/20698) in view of the teachings of Scott

(6,458,387), and of Noble (U.S. 4,574,152), Voser (U.S. 3,725,400), and Chromeczek (U.S. 3,886,125). In view of the amendments to the claims, the rejection is withdrawn.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Conclusion***

13. No claims are allowed.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachariah Lucas whose telephone number is (571)272-0905. The examiner can normally be reached on Monday-Friday, 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zachariah Lucas/  
Primary Examiner, Art Unit 1648  
15.